

ABSTRACT

A casting process that employs a collapse-prone core is disclosed. The process includes the steps of mixing one or more kind of an aggregate granular material, one or more kind of a water-soluble binder, and water, to form a mixture of the aggregate granular material, and stirring the mixture to cause it to foam. Such a mixture prevents the generation of undesirable gases when molding a mold and pouring molten metal into the mold. The process also includes the steps of charging the foamed mixture into a molding space, evaporating the moisture within the charged mixture to harden the charged mixture to mold a mold with the hardened mixture, assembling at least one mold that is cast in the hardened mixture with the mating mold to form a completed mold, pouring molten metal into the completed mold, removing the completed mold from a cast article that is composed of the solidified molten metal during a process of cooling the cast article after the molten metal is solidified, and applying a heat treatment to the cast article.

Fig. 1